Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of receiving a communications signal to produce two output signals in quadrature relation to one another, comprising:

deriving two reference signals from a single clock signal using an adjustable dual delay line, the two reference signals being substantially in a quadrature relation to one another, the dual delay line having an error signal input, the dual delay line operable to alter the two reference signals based upon a signal received at the error signal input;

using the two reference signals, performing frequency downconversion of the communications signal to produce the two output signals;

forming an error signal representing the expectation of the product of the two output signals;

propagating said error signal to said error signal input of said dual delay line; and

using the error signal to adjust said dual delay line in order to alter a relative delay between the two reference signals.

2. (Canceled).

3. (Canceled).

4. (Previously Presented) The method of Claim 1, wherein the dual delay line

is adjusted at the time of manufacture.

5. (Previously Presented) The method of Claim 1, wherein the dual delay line is automatically adjusted during operation.

6. (Currently Amended) A receiver for receiving a communications signal to produce two output signals in quadrature relation to one another, comprising:

a local oscillator;

an adjustable phase shift network having a dual delay line, operable to receive an error signal and react in response to said error signal, said dual delay line operable to derive ~~for deriving~~ two reference signals, the reference signals being derived from the local oscillator and, at least in part, upon the error signal, the plurality of signals being associated with communication signal components;

means for, using the ~~two~~ plurality of reference signals, performing frequency downconversion of the communications signal to produce the two output signals; and

a phase error detection network for forming ~~an~~ said error signal representing the expectation of the product of the two output signals,

wherein said dual delay line of said adjustable phase shift network is operable to respond to said error signal and adjust a relative delay between the two reference signals, the delay placing the two reference signals into substantially a quadrature relationship to one another.

7. (Original) The apparatus of Claim 6, wherein the phase error detection

network comprises a multiplier for multiplying the two output signals to form a product signal.

8. (Original) The apparatus of Claim 7, wherein the phase error detection network comprises a low-pass filter for filtering the product signal to thereby produce the error signal.

9. (Canceled).

10. (Canceled).

11. (Original) The apparatus of Claim 6, wherein the means for performing frequency downconversion comprises Gilbert-cell mixers.

12. (Original) The apparatus of Claim 6, wherein the means for performing frequency downconversion comprises switch-mode mixers.

13. (Original) The apparatus of Claim 12, wherein the frequency of the local oscillator is a sub-harmonic of a frequency of the communications signal.

14. (Withdrawn).

15. (Currently Amended) An apparatus, comprising:

a phase error detection network configured to receive in-phase (I) and quadrature-phase (Q) signals, said phase error detection network including:

an error signal generator; and

a dual delay line configured to receive a local oscillator signal ~~that is~~ and configured to receive an error signal from the error signal generator, the dual delay line operable to ~~and~~ generate I and Q reference signals having a relative delay that is dependent on the error signal.

16. (Previously Presented) The apparatus of Claim 15, further comprising a downconverter configured to receive a signal to be downconverted and having reference signal inputs configured to receive the I and Q reference signals.

17. (Previously Presented) The apparatus of Claim 16 wherein the downconverter comprises I and Q mixers.

18. (Previously Presented) The apparatus of Claim 15, further comprising:

a switch driver configured to receive the I and Q reference signals and generate drive signals; and

I and Q switches configured to receive I and Q drive signals from said switch driver.

19. (Previously Presented) The apparatus of Claim 18 wherein a frequency of the local oscillator signal is a sub-harmonic of a frequency of the signal to be

downconverted.

20. (Currently Amended) A method of quadrature aligning in-phase and quadrature components of a communications signal, comprising:

mixing an in-phase (I) component of a communications signal received at an RF input port of an I-channel mixer with an in-phase reference signal received at a reference input of said I-channel mixer;

mixing a quadrature (Q) component of said communications signal received at an RF input of a Q-channel mixer with a quadrature reference signal received at a reference input of said Q-channel mixer;

generating an error signal from I-channel and Q-channel outputs of said I-channel and Q-channel mixers;

providing the error signal to a dual delay line, the dual delay line operable to accept the error signal and an input reference signal, the dual delay line operable to output the in-phase reference signal and the quadrature reference signal; and

based on a value of the generated error signal, adjusting, with the ~~a~~ dual delay line, ~~so that~~ a relative delay between said in-phase and quadrature reference signals such that ~~results in quadrature alignment of~~ said in-phase and quadrature components of said communications signal are substantially in a quadrature relationship.

21. (New) A method of processing a communications signal, the method comprising:

providing an incoming communications signal;

providing a reference signal to a dual delay line, the dual delay line having two

outputs and operable to output a signal on each output;

from the reference signal, with the dual delay line, generating an in-phase reference signal and a quadrature reference signal on the two outputs;

using the incoming communications signal, the in-phase reference signal, and the quadrature reference signal, determining a misalignment between an in-phase channel and a quadrature channel of the communications signal;

based on the error, generating an error signal associated with the misalignment;

generating, with the dual delay line and based at least in part on the error signal, a new in-phase component and a new quadrature phase component, the new in-phase component and the new quadrature phase component reflecting changes associated with the error signal.

22. (New) An apparatus for receiving a communications signal, the apparatus comprising:

means for providing an incoming communications signal;

a dual delay line having two outputs and operable to generate an in-phase reference signal and a quadrature reference signal, the dual delay line operable to receive a reference signal and a first input, the in-phase reference signal and the quadrature reference signal being based at least in part upon the reference signal and the first input;

a first downconverter, accepting the communications signal and the in-phase reference signal, and producing a downconverted in-phase component;

a second downconverter, accepting the communications signal and the quadrature reference signal, and producing a downconverted quadrature component;

an error determination circuit, coupled to the first and second downconverters, operable to determine a misalignment between the in-phase component and the quadrature component and produce an error signal, the error signal being indicative of any such misalignment, the error determination circuit providing the dual delay line with the error signal as the first input in a feedback loop relationship;

the dual delay line operable to dynamically adjust the in-phase reference signal and the quadrature reference signal to maintain a substantially quadrature relationship between the in-phase reference signal and the quadrature reference signal.